Odontogenesis

- BUD STAGE:
- Ectomesenchymal Cells, derived from the Neural Crest, induce epithelial cells of the Dental Lamina to proliferate and form the Dental Enamel Organ....

Odontogenesis

- CAP STAGE:
- Further proliferation of the Epithelium into the Ectomesenchyme with formation of the Dental Papilla and Dental Follicle. Dental Papilla is the **Formative Organ of the Dentin and the Primordium of the Pulp.**
- **Tooth Germ:**
  - Dental Papilla
  - Dental Follicle
  - Dental Organ

Odontogenesis

- CAP STAGE:
- **Tooth Germ:**
  - Dental Papilla
    - Precursor of the Dentin and the Pulp
  - Dental Follicle
    - Precursor of the Cementum, PDL and the Lamina Dura
  - Dental Organ
    - Precursor of the Enamel

Odontogenesis

- BELL STAGE:
- Tooth Germ separates from the oral epithelium
- Histodifferentiation:
  - **Inner Enamel Epith.**
    - **Dominant inductive role**
    - **Causes Ectomes. cells of the Dental Papilla to diff. into Odontobasts**
    - **Cells of Inner En. Epi. differentiate into Preamelobblasts**
  - **Outer Enamel Epith.**
  - **Stellate Reticulum**
  - **Stratum Intermedium**

Odontogenesis

- CROWN STAGE:
- Inner enamel epithelium induces odontoblasts of Dental Papilla to lay down dentin and ameloblasts can now secrete enamel matrix. The **Stellate Reticulum** collapses and the odontogenic epithelium is referred to as **"Reduced Enamel Epithelium"**
- Enamel and Dentin are laid down from DEJ.

Odontogenesis

- CROWN STAGE:
- Inner and Outer Enamel Epithelium proliferate in an apical direction to form the cervical loop which is the precursor of **Hertwig's Root Sheath.** (Remnants of this persist in the Periodontal Ligament Space as the **"Rests of Malassez"**)